

**THE DRAFT SUMMARY OF THE MEETING OF THE
HAMPTON ROADS CHESAPEAKE BAY COMMITTEE, THE
REGIONAL STORMWATER MANAGEMENT COMMITTEE AND THE
CHESAPEAKE BAY IMPLEMENTATION SUBCOMMITTEE
November 1, 2012**

1. Summary of the October 4, 2012 Meeting of the Hampton Roads Chesapeake Bay and Regional Stormwater Management Committees and Chesapeake Bay Implementation Subcommittee

The Summary of the October 4, 2012 Meeting of the Hampton Roads Chesapeake Bay and Regional Stormwater Management Committees and Chesapeake Bay Implementation Subcommittee was approved as distributed.

2. Climate Change Project

Mr. Brian Batten and Mr. Randy Darden, Dewberry, gave a presentation to the Committee on the use of various modeling tools to assess the impacts of sea level rise on coastal communities. The presentation covered how uncertainty in projections can be overcome and incorporated into hazard scenarios, which can inform decision making through the use of consequence modeling. A sea level rise study done for North Carolina and another for CASI were used as an example of this process.

Mr. Bill Johnston, Virginia Beach, asked if any localities were actually using these studies to implement policy changes or projects. Mr. Batten responded that Wilmington, NC, was studying actions, but nothing else had been accomplished.

Ms. Whitney Katchmark, HRPDC, asked if a state agency was the client for the NC study. Mr. Batten stated that the state's geospatial agency was the client.

Ms. Katchmark asked where the future land use component of the study came from. Mr. Batten responded that Dewberry partnered with academics, who used land consumption rates and a suitability index to provide insight into future development patterns.

Ms. Connie Bennett, York, asked if the studies included changes in the frequency of flooding and storms resulting from climate change. Mr. Batten stated that this was incorporated into the NC study.

Ms. Katchmark asked about the accuracy of the building data used in the CASI study. Mr. Batten responded that the study assumed the elevation of each building was the Base Floor Elevation as described in local codes, and was derived using LIDAR.

Ms. Katchmark asked if there had been any pushback from the maps. Mr. Batten responded that the maps worked well in the context of the projects' purpose.

3. Virginia Beach Sustainability

Mr. Clay Bernick, Virginia Beach, gave a presentation to the Committee on Virginia Beach's sustainability plan. The process started approximately one year ago and involved collecting a significant amount of information and data. A steering committee was formed; this group developed a mission statement for the plan. The sustainability plan is a roadmap to the city's Envision 2040 future scenarios. The plan is a working draft, containing goals and objectives. Initiatives were not included, since they are presumed to change regularly. The plan includes baseline metrics, community comments, and a suggestion box. Next steps include council adoption (planned) by February.

Ms. Fran Geissler, James City, asked how the sustainability plan related to the comprehensive plan. Mr. Bernick stated that the sustainability plan includes measurable and targets, which the comprehensive plan does not.

Mr. Brian Swets, Chesapeake, asked about Virginia Beach's experiences with Agenda 21 opponents during the planning process. Mr. Bernick responded that they attempted to develop a dialogue with them and emphasized the plan was a city-driven initiative, with broad community input. Any overlap is coincidental.

Ms. Katchmark asked whether the metrics would be updated and published every year. Mr. Bernick replied that one of the features of the plan was that it would be online, with only minimal printing; metrics would be shown using an online program "dashboard" which would allow residents to track progress. The city has also identified departments responsible for each metric.

4. Bacteria Study

Ms. Jenny Tribo, HRPDC, updated the Committee on the status of the Bacteria Study. The purpose of the study was to develop a protocol for source identification in Hampton Roads and to identify the methodologies necessary to differentiate human sources of bacteria from non-human. The study had several drivers, including:

- Impaired waters throughout the region
- Outdated source tracking methodologies in TMDL studies
- "Shotgun" style implementation plans
- The need for tools to link stormwater requirements and TMDL limits
- The need to evaluate and validate SSO efforts and guide future sewer rehab efforts

Three areas were selected for the study: Moore's Creek in York County, Shingle Creek in Suffolk, and Milldam Creek in Virginia Beach. The study used a four-step approach:

Step 1: watershed survey

Step 2: targeted sampling for fecal indicator bacteria – "hot spot" identification

Step 3: application of molecular methods (multiple methods to minimize error)

Step 4: further molecular analysis

In the Mill Dam Creek area, six hot spots were identified. E. coli and enterococci concentrations were consistently elevated, and the relationship between E. coli and enterococci suggests recent contamination. The correlation between rainfall and bacteria concentrations suggests a stormwater dominated system. Human markers were most prevalent at 3 sites. Automated samplers were deployed to study delivery over the course of storms. The time of delivery is suggestive of possible sources of contamination.

In the Moores Creek area, a chronic state of elevated bacteria concentrations suggests that sediments may be serving as a reservoir of bacteria. The BacHum marker was detected in 90% of the samples at 4 of the 10 sites. Human polyomaviruses were detected at 5 sites. There is no clear source of human contamination, but potential sources of livestock contamination were identified. Intensive sampling is recommended at two high priority and two medium priority sites.

In the Shingle Creek area, the human specific marker was detected at 8 of the 9 sites, while human polyomaviruses were detected at five sites. 3 sites were recommended for intensive sampling. Initial intensive sampling and stream walks eliminated some sources in high priority areas; however, the source was not identified.

Overall, the study achieved four goals:

- 1) The identification of molecular markers useful for conducting microbial source tracking in Hampton Roads: a trio of bacteroidales based markers and human polyomavirus.
- 2) The identification of human contamination using a multi-tiered approach; however, loading assessments are still needed for quantification.
- 3) The identification of hot spots of bacterial contamination.
- 4) The documentation of lessons learned that can be used as a framework for future investigations.

Mr. LJ Hansen, Suffolk, suggested that a graphical flow chart of the molecular analysis process would be useful.

HRPDC staff will present the study to the Commission at its January meeting. Mr. Johnston suggested that HRPDC staff should work with DEQ to incorporate the findings into TMDLs. Ms. Bennett asked for further investigation into how long these bacteria remain in sediment, and if that could be also incorporated into TMDLs. Mr. Bernick suggested a follow-on study of bacteria in sediments. Ms. June Whitehurst, Norfolk, asked if the study was funded by the whole region or just a few localities. Ms. Tribo replied that funding came from a subset of the region's localities; this will be acknowledged in the report.

5. **BMP Decision Matrix**

Ms. Tribo updated the Committee on the status of the BMP Decision Matrix project. The matrix was not distributed to the Committee yet, nor will it be up for approval by the

Commission yet. The purpose of the matrix is to aid localities with planning for TMDL implementation, provide information to localities on site limitations and ancillary benefits of specific BMPs, and assist localities in selecting the most cost effective BMPs. The matrix includes structural, non-structural/alternative, and restoration BMPs, and classifies BMPs based on over a dozen metrics.

Ms. Geissler suggested that the matrix include a recommended water table separation and that the economic development potential criteria be addressed or removed, since it is currently ambiguous and confusing. One possibility could be to use aesthetics instead.

Mr. Karl Mertig, Kimley-Horn, suggested a line in the matrix for other regulatory approvals needed.

Mr. Noah Hill, DCR, suggested maintaining the economic development line, but possibly clarifying it, since it could prove useful.

6. MS4 Phase II General Permit Comments

Ms. Katchmark briefed the Committee on the status of the MS4 Phase II General Permit. There will be public hearings held for the permit. The Committee expressed its support for holding a hearing in Hampton Roads. HRPDC staff will try to have one scheduled. HRPDC staff will brief the Committee on the final comments in December in order to submit them by the January deadline. The major comments include:

- 1) The baseline loading rates are not accurate.
- 2) DCR should use the 2010 no-action model run for baseline loading rates.
- 3) DCR should revise the regulations to allow localities to take credit for BMPs put in place between 2006 and 2013.
- 4) The permit does not specify a methodology for calculating nutrient reductions.

Next steps include presenting the comments to the PDC for its approval. The Committee expressed its support for DCR developing a guidance document for implementing permits.

7. Status Reports

HRPDC staff made several announcements. The Hampton Roads Watershed Roundtable will be meeting November 15th. The first meeting of the Hampton Roads Adaptation Forum will be held November 16th in Suffolk. Ms. Katchmark reported that currently it is difficult to not apply new development stormwater standards to redeveloped sites that are left empty for a while.

Chesapeake staff reported that final interviews are being held for the city's Planning Director position. Chesapeake will also be releasing a draft of the comprehensive plan to the public in December.

Hampton staff reported that the city received an audit letter from EPA describing its program violations. The city was cited for two violations: lacking an E&S inspector and a police officer washing his car outside the wash bay. The city was fine \$70,000.

Navy representatives reported that a stormwater BMP opportunity assessment is being performed for the Naval Hospital in Portsmouth. Regional modeling for the PCB TMDL for the Elizabeth River is almost done. Results will be submitted to DEQ to help develop a TMDL. Presentations from DEQ on how waste loads will be allocated may be needed.

DEQ staff reported that the state is planning for a future statewide mercury TMDL.

DCR staff reported that the stormwater training previously scheduled to be held at VIMS will be rescheduled.

8. Other Matters

The next meeting of the Joint Environmental Committee is scheduled for December 6, 2012 at the HRPDC office in Chesapeake, Virginia. Materials will be sent in advance for review.